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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TERENCE BOYLE, ALAN SCHNEIDER,
NOLAN GESHER, and JON CASSELL.

Appeal 2008-0923
Application 09/535,877
Technology Center 3600

Decided: March 24, 2008

20 Before HUBERT C. LORIN, ANTON W. FETTING, and
21 STEVEN D.A. McCARTHY, *Administrative Patent Judges*.
22 FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL.

STATEMENT OF CASE

25 Terence Boyle, Alan Schneider, Nolan Gesher, and Jon Cassell (Appellants)
26 seek review under 35 U.S.C. § 134 of a final rejection of claims 1-4, 8, 10-15, 17-
27 21, 23, 26, 30-35, 39, 41-43, 46, and 49-51, the only claims pending in the
28 application on appeal.

1 We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

2
3 We REVERSE.

4 The Appellants invented an automated reconciliation of client investment
5 accounts using matching software. It has a single point of access for all custody
6 data and accounting and investment activity information, and collects, reformats,
7 enhances, and makes fit for electronic reconciliation all of the data from all of its
8 sources. The account records include, for example, positions or holdings, such as
9 securities positions or holdings and cash positions or holdings, and transactions,
10 such as securities transactions and cash transactions. The account records are
11 received electronically in varying message and file formats and the system parses,
12 validates and reformats the records to a standard format for uploading to a service
13 bureau database. The uploaded account records are automatically compared
14 according to predefined matching rules to identify whether the first account record,
15 for example, from a fund manager, matches the second account record, for
16 example, from a custodian. The system allows either or both of the fund manager
17 and the custodian to predefine the matching rules in any number of ways. For
18 example, the available match groups for the fund manager and the custodian can be
19 predefined. Likewise, the matching rules for one or both of the account records for
20 positions or transactions can be predefined, and the matching rule can be
21 predefined either substantially similar for each or different from one another.
22 Predefining the matching rules can include predefining matching criteria in terms
23 of tolerance in one or both of percentage terms and nominal terms. Further, the
24 matching rules can be predefined with respect to any number of items of account

1 record data, such as account number, security identification, units, unit cost, total
2 cost, unit price, and total market value. In addition, the matching rules can be
3 predefined in terms of levels of match success (Specification 3:10 – 4:14).

4 An understanding of the invention can be derived from a reading of exemplary
5 claim 1, which is reproduced below [bracketed matter and some paragraphing
6 added].

7 1. A method for reconciliation of fund manager and custodian account
8 records, comprising:

9 [1] receiving a first account record by a database electronically from
10 one of

11 an internal portfolio tracking system of a fund manager and
12 a custody network of a custodian and

13 receiving a second account record by the database from the other of
14 the internal portfolio tracking system of the fund manager and the
15 custody network of the custodian;

16 [2] allowing the fund manager and the custodian

17 to predefine matching rules

18 for the respective account records

19 independently of one another;

20 [3] automatically comparing the account records by a computer
21 application according to the predefined matching rules

22 for at least one item of account data selected from a group of
23 account data items consisting of

24 account number,

25 security identification,

26 units,

27 unit cost,

28 total cost,

- unit price, and
- total market value
- to identify one of matched and unmatched first and second account records; and
- [4] if unmatched account records are identified in the comparison, generating a report of the comparison by the computer application
- identifying the unmatched account records accessible for display by the fund manager and the custodian,
- allowing a manual match of the unmatched account records on the database by
 - either one of the fund manager and
 - the custodian, and
- storing an historical record of the manual match by the computer application accessible by either one of the other of the fund manager and the custodian.

This appeal arises from the Examiner's Final Rejection, mailed December 1, 2005. The Appellants filed an Appeal Brief in support of the appeal on June 22, 2006. An Examiner's Answer to the Appeal Brief was mailed on February 2, 2007.

PRIOR ART

The Examiner relies upon the following prior art:

Harris	US 5,517,406	May 14, 1996
Josephson	US 5,689,579	Nov. 18, 1997
Hawkins	US 6,247,000 B1	Jun. 12, 2001

1 REJECTIONS

2 Claims 1, 11-15, 17-20, 30-35, 42, 43, 50, and 51 stand rejected under 35
3 U.S.C. § 103(a) as unpatentable over Hawkins.

4 Claims 2-4, 8, 10, 26, 39, 41, 46, and 49 stand rejected under 35 U.S.C. §
5 103(a) as unpatentable over Hawkins and Harris.

6 Claims 21 and 23 stand rejected under 35 U.S.C. § 103(a) as unpatentable over
7 Hawkins and Josephson.

8 ISSUES

9 The issues pertinent to this appeal are

10 • Whether the Appellants have sustained their burden of showing that the
11 Examiner erred in rejecting claims 1, 11-15, 17-20, 30-35, 42, 43, 50, and 51
12 under 35 U.S.C. § 103(a) as unpatentable over Hawkins.

13 • Whether the Appellants have sustained their burden of showing that the
14 Examiner erred in rejecting claims 2-4, 8, 10, 26, 39, 41, 46, and 49 under
15 35 U.S.C. § 103(a) as unpatentable over Hawkins and Harris.

16 • Whether the Appellants have sustained their burden of showing that the
17 Examiner erred in rejecting claims 21 and 23 under 35 U.S.C. § 103(a) as
18 unpatentable over Hawkins and Josephson.

19 The pertinent issue turns on whether one of ordinary skill would have known to
20 allow the fund manager and the custodian to predefine matching rules for the
21 respective account records independently of one another.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Hawkins

01. Hawkins is directed to an embodiment of the Crossmar Matching Service (CMS) and matches order routing of securities and other instrument types, and matches other transaction information on a post-execution basis, such as during the confirmation and settlement phase. The functions occur on the post-execution side and include matching the financials, matching the delivery instructions, and confirming those deliveries and instructions (Hawkins 4:8-19).

02. Hawkins describes receiving account records from a fund manager and a custodian (Hawkins 12:18-34).

03. Hawkins describes automatically comparing account records according to the predefined matching rules (Hawkins 22:59 – 23:25).

04. Hawkins describes generating a report identifying unmatched records (Hawkins 20:26-37).

05. Hawkins uses matching fields that include the following:
counterparty; security type and quantity; security code and description;
trade date; settlement date; and settlement currency and amount.

1 previously Matched MT518 confirms; and amended confirms cannot
2 break a matched settlement (Hawkins 23:4-15).

3 06. Hawkins' MT52x settlements, MT518 confirms, and MT592 cancel
4 settlements are part of the SWIFT (Society for Worldwide Interbank
5 Financial Telecommunication) transaction scheme. The SWIFT format
6 for an order message is an MT502 message. An order side confirmation
7 message in SWIFT format is designated as an MT518. A receive against
8 payment message in SWIFT format is designated as an MT521 and a
9 deliver against payment message is designated as an MT523. A receive
10 free message in SWIFT format is designated as an MT520 and a deliver
11 free message is designated as an MT522. All of these formats are
12 predefined (Hawkins 13:27-41).

13 07. Hawkins describes its rationale as meeting a needed for automating
14 matching of transactions among brokers and custodians, especially for
15 use in conjunction with the SWIFT network or other financial networks
16 (Hawkins 3:53-55).

17 *Harris*

18 08. Harris is directed to an automated trade processing system including a
19 record keeper for receiving participant mutual fund transaction requests.
20 The record keeper aggregates participant mutual fund transaction
21 requests by mutual fund into omnibus plan trades. These requests are
22 then transmitted in at least one omnibus plan trade file which has a
23 plurality of fields of information about the omnibus plan trades. A host
24 processor, interacting with the record keeper, receives the omnibus trade

1 files, verifies at least one of the plurality of fields of information in the
2 omnibus trade files, sorts, prices and extends the omnibus plan
3 transaction requests, and trade-acknowledgment confirms the omnibus
4 plan trades to the record keeper. The host processor then transfers the
5 omnibus plan trades to a transaction executor which executes the
6 omnibus plan transaction requests. The trade-acknowledgment
7 confirmation occurs at a time prior to execution of the omnibus plan
8 trades (Harris 3:7-25).

9 *Josephson*

10 09. Josephson is directed to reconciling a first database with a second
11 database by comparing the records of the first database with the records
12 of the second database and applying field mismatch tolerance rules
13 indicating, by field, an allowed extent of mismatch (Josephson 4:9:28).

14 10. Josephson describes basing its matching rules upon any suitably
15 applied mathematical theory, including statistics, stochastic modeling,
16 chaos theory, standard deviation, probability theory, permutations and
17 combinations, frequency, or the like (Josephson 9:12-18).

18 *Facts Related To Differences Between The Claimed Subject Matter And The*
19 *Prior Art*

20 11. None of the applied references describe or suggest allowing a fund
21 manager and a custodian to predefine matching rules for respective
22 account records independently of one another.

Facts Related To The Level Of Skill In The Art

12. Neither the Examiner nor the Appellants has addressed the level of ordinary skill in the pertinent art of database management. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985).

Facts Related To Secondary Considerations

13. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the Specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369, (Fed. Cir. 2004).

Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003) (claims must be interpreted “in view of the specification” without importing limitations from the specification into the claims unnecessarily).

1 Although a patent applicant is entitled to be his or her own lexicographer of
2 patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*,
3 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing such
4 definitions in the Specification with sufficient clarity to provide a person of
5 ordinary skill in the art with clear and precise notice of the meaning that is to be
6 construed. *See also In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (although
7 an inventor is free to define the specific terms used to describe the invention, this
8 must be done with reasonable clarity, deliberateness, and precision; where an
9 inventor chooses to give terms uncommon meanings, the inventor must set out any
10 uncommon definition in some manner within the patent disclosure so as to give
11 one of ordinary skill in the art notice of the change).

12 *Obviousness*

13 A claimed invention is unpatentable if the differences between it and the
14 prior art are “such that the subject matter as a whole would have been obvious at
15 the time the invention was made to a person having ordinary skill in the art.” 35
16 U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727 (2007); *Graham*
17 *v. John Deere Co.*, 383 U.S. 1, 13-14 (1966).

18 In *Graham*, the Court held that that the obviousness analysis is bottomed on
19 several basic factual inquiries: “[1] the scope and content of the prior art are to be
20 determined; [(2)] differences between the prior art and the claims at issue are to be
21 ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved.” 383
22 U.S. at 17. *See also KSR Int'l v. Teleflex Inc.*, 127 S.Ct. at 1734. “The
23 combination of familiar elements according to known methods is likely to be
24 obvious when it does no more than yield predictable results.” *KSR*, at 1739.

1 "When a work is available in one field of endeavor, design incentives and
2 other market forces can prompt variations of it, either in the same field or a
3 different one. If a person of ordinary skill can implement a predictable variation,
4 § 103 likely bars its patentability." *Id.* at 1740.

5 "For the same reason, if a technique has been used to improve one device,
6 and a person of ordinary skill in the art would recognize that it would improve
7 similar devices in the same way, using the technique is obvious unless its actual
8 application is beyond his or her skill." *Id.*

9 "Under the correct analysis, any need or problem known in the field of
10 endeavor at the time of invention and addressed by the patent can provide a reason
11 for combining the elements in the manner claimed." *Id.* at 1742.

ANALYSIS

Claims 1, 11-15, 17-20, 30-35, 42, 43, 50, and 51 rejected under 35 U.S.C. § 103(a) as unpatentable over Hawkins.

15 The Appellants argue these claims as a group.

¹⁶ Accordingly, we select claim 1 as representative of the group.
¹⁷ 37 C.F.R. § 41.37(c)(1)(vii) (2007).

18 The Examiner found that Hawkins described steps [1], [3], and [4], but not step
19 [2]. The Examiner found that one of ordinary skill would have added step [2] to
20 “develop an efficient automated system for reconciling securities account records
21 between a securities custodian and a fund manager” (Answer 3-4).

1 The Appellants contend that the Examiner has provided no basis for
2 concluding that one of ordinary skill would have added step [2], other than
3 impermissible hindsight (Br. 6).

4 We agree. While we agree with the Examiner that Hawkins describes steps
5 [1], [3], and [4] (FF 02, 03, 04, & 07), Hawkins fails to describe step [2] (FF 11).
6 Hawkins predefines its matching rules [FF 05] in line with the formats of SWIFT
7 message fields [FF 06]. Since all of these messages are provided by the same
8 SWIFT system, and there is a predefined set of matching rules, there is no need
9 suggested by Hawkins to alter the matching rules.

10 The Examiner responds that the reason for finding that one of ordinary skill
11 would have applied step [2] does not have to be the same as the Appellants' and
12 that the reason can be found in the nature of the problem to be solved (Answer 10).
13 While we agree with these basic principles, the Examiner has failed to show how
14 these principles apply to finding the obviousness of step [2]. The Examiner cites
15 portions of Hawkins describing matching financial transaction, using matching
16 rules, and options for users to view differences (Answer 10, ¶ 4). However, the
17 Examiner provides no reason for concluding that step [2] would have followed
18 from these facts, or how a need to develop an efficient automated systems for
19 reconciling securities account records between a securities custodian and a fund
20 manager would have led to step [2].

21 The Examiner's reasoning appears to be that, having first thought of step [2],
22 one of ordinary skill would have seen its advantages in developing such systems as
23 concluded by the Examiner. But the Examiner has not even shown how this

1 follows, and has more critically failed to show that one of ordinary skill would
2 have considered adding step [2] to Hawkins to begin with.

3 Often, it will be necessary for a court to look to interrelated teachings
4 of multiple patents; the effects of demands known to the design
5 community or present in the marketplace; and the background
6 knowledge possessed by a person having ordinary skill in the art, all
7 in order to determine whether there was an apparent reason to
8 combine the known elements in the fashion claimed by the patent at
9 issue. To facilitate review, this analysis should be made explicit.
10 See *In re Kahn*, 441 F.3d 977, 988 (C.A.Fed.2006) ("[R]ejections on
11 obviousness grounds cannot be sustained by mere conclusory
12 statements; instead, there must be some articulated reasoning with
13 some rational underpinning to support the legal conclusion of
14 obviousness"). As our precedents make clear, however, the analysis
15 need not seek out precise teachings directed to the specific subject
16 matter of the challenged claim, for a court can take account of the
17 inferences and creative steps that a person of ordinary skill in the art
18 would employ.

19 *KSR*, 127 S. Ct. at 1740-41. The Examiner's reasoning is conclusory in that it
20 begins with the claim limitation and from that infers a generic benefit in hindsight.
21 This is not a rational underpinning that shows a connection by articulated
22 reasoning of what those of ordinary skill knew, leading to the claim limitation at
23 issue.

24 The Appellants have sustained their burden of showing that the Examiner erred
25 in rejecting claims 1, 11-15, 17-20, 30-35, 42, 43, 50, and 51 under 35 U.S.C. §
26 103(a) as unpatentable over Hawkins.

Claims 2-4, 8, 10, 26, 39, 41, 46, and 49 rejected under 35 U.S.C. § 103(a) as unpatentable over Hawkins and Harris.

3 Harris is directed to an automated trade system in which various trade
4 parameters are verified (FF 08). The Examiner has not made any findings that
5 Harris would have made it obvious to apply step [2] of claim 1 to these claims.
6 Nothing in Harris or its combination with Hawkins suggests adding step [2] to
7 claim 1, or its equivalent to independent claim 35, from which all of the claims in
8 this rejection depend (FF 11). The Appellants have sustained their burden of
9 showing that the Examiner erred in rejecting claims 2-4, 8, 10, 26, 39, 41, 46, and
10 49 under 35 U.S.C. § 103(a) as unpatentable over Hawkins and Harris for the same
11 reasons we found, *supra*.

12 *Claims 21 and 23 rejected under 35 U.S.C. § 103(a) as unpatentable over Hawkins*
13 *and Josephson.*

14 Josephson is directed to reconciling a first database with a second database by
15 comparing the records of the first database with the records of the second database
16 and applying field mismatch tolerance rules indicating, by field, an allowed extent
17 of mismatch (FF 09). These rules may be based upon any suitably applied
18 mathematical theory, including statistics, stochastic modeling, chaos theory,
19 standard deviation, probability theory, permutations and combinations, frequency,
20 or the like (FF 10). Thus, although Josephson, unlike Hawkins, describes mutable
21 matching rules, Josephson describes the rules as based on statistics rather than
22 independent actions by a manager and custodian.

23 The Examiner has not made any findings that Josephson would have made it
24 obvious to apply step [2] of claim 1 to these claims. Nothing in Josephson or its

1 combination with Hawkins suggests adding step [2] to claim 1, or its equivalent to
2 independent claim 35, from which all of the claims in this rejection depend (FF
3 11). The Appellants have sustained their burden of showing that the Examiner
4 erred in rejecting claims 21 and 23 under 35 U.S.C. § 103(a) as unpatentable over
5 Hawkins and Josephson for the same reasons we found, *supra*.

6 **CONCLUSIONS OF LAW**

7 The Appellants have sustained their burden of showing that the Examiner erred
8 in rejecting claims 1-4, 8, 10-15, 17-21, 23, 26, 30-35, 39, 41-43, 46, and 49-51
9 under 35 U.S.C. § 103(a) as unpatentable over the prior art.

10 **DECISION**

11 To summarize, our decision is as follows:

12 • The rejection of claims 1, 11-15, 17-20, 30-35, 42, 43, 50, and 51 under 35
13 U.S.C. § 103(a) as unpatentable over Hawkins is not sustained.

14 • The rejection of claims 2-4, 8, 10, 26, 39, 41, 46, and 49 under 35 U.S.C. §
15 103(a) as unpatentable over Hawkins and Harris is not sustained.

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REVERSED

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